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Some Activities of the Polish Meteorological
and Hydrological Society

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SOME ACTIVITIES OF THE POLISH METEOROLOGICAL AND HYDROLOGICAL
SOCIETY

On 31 January 1950, there took place a general meeting of the members of the society on the premises of the PIHM in Warsaw. The meeting was opened by the chairman of the main board of the society, Professor Doctor St. Leszczycki. The deliberations were presided over by Professor Doctor A. Kosiba, and the duties of secretary were fulfilled by W. Wiszniewski, Master of Science.

The main board reported on the activities of the society for the period 1948/49. A detailed extract from this report is given elsewhere.

Next, the chairman of the auditing commission reported on the inspection that had been made concerning the management of finances in the society. After a lively discussion on this report and on the activities of the society, a resolution was passed by unanimous acclamation to approve the activities of the retiring board of the society.

The general meeting elected a new board, composed of the following: Chairman, Professor Doctor E. Stenz; First Vice-Chairman, Doctor of Engineering, J. Lambor; Second Vice-Chairman, Docent, Doctor R. Guminski; Secretary, Doctor St. Zych; Treasurer, A. Rojecki; Board Member, Professor Doctor St. Leszczycki. In addition to the foregoing, the following persons are appointed to the named positions on the main board: the chairmen of the sections of the society: Professor Doctor Wl. Gorczynski

(Torun Section), Professor Doctor A. Kosiba (Wroclaw section), Doctor Wl. Milata (Krakow section), and Professor of Engineering W. Tubielewicz (Baltic section at Gdansk).

The following persons are included in the auditing commission: Chairman, Doctor of Engineering J. Matusewicz; Members: Master of Science S. Rafalowski; Docent Doctor S. Pietkiewicz; Deputy Members: Engineer S. Swirski and Master of Science W. Wiszniewski.

The work plan and preliminary budget were discussed in detail for the year 1950 by Docent Doctor R. Guminski.

At the suggestion of the main board, the general meeting passed the following resolutions:

(1) Unanimously approved conferral of the title of honorary member of the society, in recognition of the services rendered toward the development of meteorology and climatology in Poland, upon Professor Doctor Eugeniusz Romer, Professor Doctor Wladyslaw Gorczynski, and Professor Wladyslaw Smosarski.

(2) Approved new sections of the society at: Gdansk (for the Baltic Sea coast, Krakow, Torun, and Wroclaw.

The board of the society created the following units:

(1) An editorial committee: Chairman-Editor, Professor Doctor E. Stenz; members: Professor Doctor W. Gorczynski; Docent Doctor R. Guminski; Doctor of Engineering J. Lambor; Doctor W. Milata; Master of Science W. Marczewski; Master of Science S. Rafalowski; and A. Rojecki.

(2) A commission for meteorological dictionary: Chairman, A. Rojecki; members: Master of Science S. Rafalowski; Master of Science W. Parczewski; and Docent Professor Doctor S. Pietkiewicz.

(3) A commission for the evaluation and purchase of books: Chairman, Professor Doctor E. Stenz; members: Professor of Engineering K. Debski; Docent Doctor R. Guminski; Master of Science S. Rafalowski; and A. Rojecki.

The Baltic Section

On 11 November 1949 there took place an organizational meeting of the Baltic section in the PTMH at Gdansk at which the following board was elected: Chairman, Professor of Engineering W. Tubielewicz; Deputy Chairman, Master of Science T. Komar; Secretary, Engineer J. Karwowski; Treasurer, W. Sulimowicz; Board Member, Engineer J. Woznicki. The auditing commission chosen consisted of: Chairman, Doctor K. Lomniewski; members, Professor Doctor Z. Pazdro and Master of Science D. Piasecki.

REPORT

BY THE MAIN BOARD OF THE POLISH METEOROLOGICAL AND HYDROLOGICAL SOCIETY ON THE ACTIVITIES OF THE SOCIETY FOR THE YEARS 1948 - 1949

The main board of the Society worked in the following composition: Chairman, Professor Doctor St. Leszczycki; Deputy-Chairman, Docent Doctor R. Guminski; Secretary, Doctor St. Zych;

Treasurer, Engineer Z. Swirski (co-opted on 18 December 1947).

Board Members: Professor Doctor E. Stenz (co-opted on 10 December 1948), Professor Doctor W. Gorczynski (Chairman of the Torun section), Professor Doctor A. Kosiba (Chairman of the Wroclaw section), Doctor W. Milata (Chairman of the Krakow section), Professor of Engineering W. Tubielewicz (Chairman of the Baltic section).

Audit Commission: Chairman, Doctor of Engineering J. Matuszewicz; members: Docent Doctor St. Pietkiewicz, Cz. Szczecinski; deputies: Engineer L. Skibniewski, Master of Science W. Wiszniewski.

The numerical development of the society is illustrated by the following membership data: 1 January 1948 - 48; 1 January 1949 - 159; 1 January 1950 - 321.

Up to the present, the following sections of the society have been founded:

- (1) Torun (January 1948) and the Szczecin circle of this section (February 1949)
- (2) Wroclaw (December 1948)
- (3) Krakow (December 1948)
- (4) for the Baltic at Gdansk (November 1949).

The society's section at Poznan is in the process of being organized.

The activities of the society have developed according to the directives established at the general organizational meeting.

I. ORGAN OF THE SOCIETY

The Meteorological and Hydrological Review published by the society is of an informative and scientific nature as was resolved at the general meeting. Apart from scientific investigation, much attention was paid to the practical application of meteorology and hydrology, making the readers acquainted with the progress of science, book reports, reviews of literature, and bibliography with special emphasis upon Soviet literature.

Up to the present time, the 1948 yearbook has been issued in two volumes. The 1949 yearbook has already been sent to the printer.

The 1948 yearbook was edited by an editorial committee composed of the following persons: Chairman, Professor Doctor W. Gorczynski; members of the committee, Docent Doctor R. Guminski, Doctor of Engineering W. Matusiewicz, and Professor Doctor St. Turczynowicz. It was printed at Torun.

The 1948 yearbook was issued in format A₅ and numbered 292 pages of print. Of this, 11 scientific articles constituted 100 pages, whereas the rest was devoted to reports on literature in the field, critical reviews, etc. The Review is published in 2,300 copies.

The Meteorological and Hydrological Review is gaining an ever larger number of recipients and steady subscribers.

The 1949 yearbook is being printed in Warsaw, and its editorial committee was enlarged by the following persons: Professor Doctor M. Stenz, Secretary of the editorial committee; A. Rojecki, Deputy Secretary of the editorial committee; Professor Doctor A. Kosiba, Doctor of Engineering J. Lambor, and Doctor W. Milata.

The Society's Library

Up to the end of September 1949, Professor Doctor W. Gorczynski took care of the matter of exchanging the Review for any other publications both at home and abroad. From October 1949, Professor Doctor E. Stenz took over this exchange work and simultaneously began the organization of a library for the society. At the present time, in the first organizational stage, the library numbers 219 positions.

Exchange copies of foreign publications will only begin to flow in the near future, because No 2 - 4 for 1948 of the Review was not sent out through the Bureau of International Exchange of Publications until the end of December 1949.

The year 1950 promises a rapid development in the library, since in that year it will have at its disposal 1 million zlotys for the purchase of books and periodicals.

At the request of the Ministry for Education, the main

board called into existence a commission for the evaluation of books imported from abroad. This commission consists of: Chairman, Professor Doctor E. Stenz; Deputy Chairman, Professor of Engineering K. Debski; and Secretary, A. Rojecki.

Meteorological Terminology

Introductory work on a meteorological dictionary was assigned by the board to A. Rojecki. Up to the present time, 2,500 expressions have been catalogued in the Russian, English, French, and German languages, as well as 500 terms in the English language alone. Work on this dictionary has fallen behind schedule due to the necessity of ordering appropriate literature from abroad. Now it will be possible in the next few months to submit the terms to the society for their comment. During the current year, work on the dictionary can be considerably hastened.

Organizing Advanced Studies in the Field of Geophysical Sciences

Much attention was paid to this problem in the period being reported upon. Up to June 1949 a series of meetings were held in the commissions on geology, physics, and geophysics attached to the main scientific council. The following program was worked out for a master's degree in geophysics, with three fields of specialization: (1) physics of the earth's crust, (2) physics of the atmosphere, and (3) physics of the water. Members of the society took an active part in this work.

During the first two years of studies this program is identical with the program of studies in the field of physics; but in the third year it is only two-thirds the same. One-third of the hours in the program of the third year is devoted to studies which are strictly in the field of geophysics. The fourth and fifth years of studies consist almost completely of lectures and exercises in the geophysical sciences.

This problem is discussed in greater detail elsewhere. For the Ministry of Education the board drew up a supplement to the planned requirements for textbooks in advanced schools and a list of textbooks for advanced schools now being written for publication.

Popularization and Scientific Activities

During the period of the report there took place the following scientific meetings in Warsaw, organized by the main board:

(1) Master of Sciences W. Parczewski: "The History of Meteorology in Poland."

(2) Professor Doctor W. Gorczynski: "The Distribution of the Polish-American Population in Connection with Climatic Factors."

(3) Professor Doctor E. Stenz: "The River Network and Climate of Afghanistan."

(4) Engineer Z. Kajetanowicz: "The Practical Problems of the Hydrological Service in Poland."

(5) Doctor of Engineering J. Matusiewicz: "The Temperature of Flowing Waters."

(6) A scientific meeting devoted to Soviet science in connection with the month for deepening Polish-Soviet Friendship.

(a) Doctor St. Zych: "The Development of Meteorology and Hydrology and the Transformation of Economic Life in the USSR."

(b) A. Rojecki: "The Participation of Soviet Science in the Organization of Maritime Expeditions and Arctic Explorations."

(c) Professor Doctor E. Stenz: "Soviet Work in the Field of Optics of the Night Sky."

(c) Engineer W. Jarocki: "Crosswise Circulation of Water and its Application to Hydrotechnology."

The Torun Section

(1) Professor Doctor W. Gorczynski: "Air Communications Around the World."

(2) Professor Doctor Gorczynski: "The Distribution of the Polish-American Population in Connection with Climatic Factors."

(3) Doctor E. Hohendorf: "The Scientific Achievements of Michael Faraday."

(4) Professor Doctor W. Gorczynski: "Concerning Climatic Maps for Scientific and Instructional Purposes."

(5) Master of Science J. Antonowicz: "The Earth's Magnetism."

(6) Professor Doctor W. Gorczynski: "The Climates of the Soviet Union."

(7) Doctor W. Okolowicz: "The Teaching of Climatology in the Schools."

The Wroclaw Section

(1) Professor Doctor E. Stenz: "The Meteorological Service in Afghanistan."

(2) Professor Doctor St. Bac: "Winter Observations concerning the Movement of Soils."

(3) Professor Doctor M. Cena: "Investigations of the Physical Factors in the Climate Animal Habitats."

(4) Doctor a. Schmuck: "An Attempt at Determining Evaporation in Poland."

The Baltic Section

(1) Master of Science M. Smijewski: "A Study of the Winds on the Seacoast."

The Krakow Section

Four scientific sessions.

Altogether during the period of this report, 23 scientific sessions were organized.

Scientific Work in the Field

In 1949, thanks to the financial aid obtained, the society was able to commence territorial investigations in the Tatra mountains which were planned and executed by the Krakow section of the society:

- (1) Investigations of the "permanent" snow fields and water reservoirs in the Tatra mountains.

These investigations were conducted by groups of students from the Jagiellonian University in Krakow under the direction of Engineer J. Kajetanowicz and Doctor W. Milata. These groups collected considerable observational, photographic, and cartographic material during the months of July, August, September, and October 1949. The collected materials are at present being worked on.

- (2) Thermic investigations on the lakes in the Tatras.

In the summer of 1949, regular investigations of the thermic properties of the lakes in the Tatras mountains were conducted, especially in the group at the Mala Gasienicowa and in the Dolina 5 Stawow Poskich [Valley of the Five Polish Ponds]. This work was also connected with the investigation of the thermic qualities of water reservoirs situated in the Tatra caverns.

Research under Contract

From the funds designated for that purpose by the Society for Mutual Insurance, our society under the direction of Engineer M. Holga, drew up for publication Hail in Poland for the Years 1947 and 1948.

The members of the Krakow section completed a whole series of projects entrusted to that section of the society by different governmental institutions and organizations, like Nowa Huta, ZOR, FKPG, PZN, PTT, etc.

Collaboration with PIHM.

The activities of the society have proceeded in harmonious collaboration with the PIHM. The society has used the premises of the PIHM, participated through its representative in the committee work of the PIHM, as well as in the instructional meeting of PIHM section directors in the matter of organization.

Finances of the society

Subsidies of the Ministry for Education and others were part of the society's income. Other sources were membership dues and income from the sale of the Review. The major part of the total income was absorbed by the Review and by authors' royalties.

The financial turnover of the society amounted to 3,550,825 zlotys on the income side, and to 2,919,303 zlotys on the expenditure side in which the various sections accounted for 1,152,820 zlotys income and 1,036,019 zlotys expenditure.

The administrative expenses of the society's main board for the years 1948 and 1949 amounted to 35,510 zlotys.

Meeting of the PTMH on 27 October 1949

On 27 October 1949 a meeting of the Polish meteorological and Hydrological Society took place in Warsaw, devoted to discussion of the achievements in meteorology and hydrology made by the Soviets. The chairman of the meeting was Professor Doctor E. Stenz, who emphasized in the opening speech that the investigations undertaken in the field of meteorology and hydrology in the Soviet Union had been so numerous that only some narrow sectors of this activity could be reported upon at the meeting.

The first person to be heard was Doctor S. Zych, who gave a report in outline form upon the significance of meteorology and hydrology for the economic problems of the USSR. The following specifically belong to these problems: (1) the northern water route, (2) communication by air, (3) the construction and expansion of land roads and waterways, (4) agricultural meteorology, (5) the exploitation of water power, (6) bioclimatic and microclimatic problems, and (7) long-range weather forecasts.

Next, counselor A. Rojecki reported on the oceanographic work conducted by the USSR. After a short discussion of what had been done by the old Russia, the speaker presented the development of oceanographic studies in the USSR, which were begun in 1918 with the organization of the "Floating Scientific Maritime Institute." This institute was given for its use a 550-ton

scientific vessel, the "Persey," thanks to which investigations could be conducted in the Barents Sea and in other water areas. In 1929, there was established a Maritime Hydrographic Station on the Black Sea which was next transformed into the Maritime Hydrographic Institute of the Academy of Sciences. This institute also possesses a hydro-optical laboratory, suitable for optical investigations in sea waters. Oceanographic studies are also being conducted by the following: The State Oceanographic Institute of the Main Board of the Hydro-Meteorological Service, and the Scientific-Investigational Institute of the Main Board of the Northern Maritime Route. In 1946, investigations of the geological construction of the sea bottom were conducted. During the next few years, an expedition took place on a 30 - ton vessel, the "Slava", in the waters on the southern half of the globe.

Next, Professor Doctor E. Stenz discussed Soviet work on the luminescence of the sky. The speaker mentioned that as far as the dusk phenomena and the luminescence of the night sky are concerned, a special book is devoted to these topics. It was written by Professor Hvostikov (The Luminescence of the Night Sky, 496 pages, Moscow, 1948).

The luminescence of the night sky was investigated among others by the Institute for Physics and Astronomy at Alma Ata, the Institute for Geophysics at Moscow, and other scientific investigational institutions. Professor Hvostikov conducted work on the spectra of fluorescence in the sky at dusk, and the Academician Fesenkov worked on the problem of the composition of the earth's atmosphere in its higher layers.

As far as the luminescence of the night sky is concerned, the following are part of it: zodiacal light, the light of the

stars, and the shining of the earth's atmosphere. The speaker mentioned the results achieved by Fesenkov who had investigated the brightness of a green streak of this light which had a wave length of 5,577 angstrom units. Astapovich also arrived at interesting results when he observed the "counterglow" (protivosiyanie, Gegenschein) which had been discovered at the beginning of the nineteenth century by Humboldt. That author came to the conclusion that this light is not emitted by dusts, as is the case with zodiacal light, but rather by the "gas tail of the earth," which has a length of up to 200,000 kilometers and is directed in the opposite direction to the sun. The spectrum of this light is similar to that emitted by the earth's atmosphere at night.

At the end of the meeting, Engineer W. Jarocki spoke about the hydrological work done in the USSR. He reported on the special work concerning the artificial diagonal circulation of water which is employed in regulating rivers. Soviet engineers most often use wooden barriers of different shape or even whole systems of such structures for directing river currents in the desired direction. They are placed at the surface of the water, or at a middle depth, or even at the bottom of the river. With the aid of these simple devices, experiments are being conducted in protecting river banks from being washed away. They also effect the loosening of the river bottom by axis-wise currents, which deepen the channels. They serve to divert water from the rivers for canalization purposes, and are used as safety devices which guard against the washing away of bridge supports.

The reports were followed by a lively discussion in which many members of the society participated.

- 15 - END

F. S.